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AUTHOR Tschantz, Linda LeBlanc
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ABSTRACT

A study was made of the relationship between children's play behaviors and sociometric status, with particular attention to the influence of play materials on behavior. Subjects were 95 children, ranging in age from 44 to 60 months, attending 10 preschool classrooms. Sixty observations were made of each child's play behaviors. Sociometric measures administered were positive nomination, negative nomination, and a play rating scale. All play materials and activities permitted by the classroom teacher during free play time were recorded and rated according to complexity and variety. Results indicated that a low but significant relationship existed between group-dramatic play and positive peer nominations. Complexity of materials was significantly negatively related to unoccupied behavior and solitary-functional play. Complexity was significantly positively related to all forms of constructive and group play. Variety of materials was significantly negatively correlated with unoccupied behavior and significantly positively related to group-constructive play. The number and type of children identified in each status group was found to be dependent upon the sociometric measure or combination of measures employed. Children who were disliked engaged in significantly less social play than popular children. No controversial group was identified, suggesting research problems. (RH)

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PRESCHOOL PLAY BEHAVIORS AND SOCIOMETRIC STATUS

Linda LeBlanc Tschantz

Assistant Professor of Early Childhood Education

Education Department

Wheaton College

Norton, Massachusetts 02766

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Introduction

The peer system is an important social system in a child's life which makes unique contributions to a child's total development. Several theories describe the contribution of peer relationships to the development of social knowledge. One of the earliest theories, that of Piaget (1932), proposes that early peer relationships allow the child to experience cooperation and conflict. Furthermore, in peer interactions children learn how to resolve conflict through the social process of negotiation. Social-cognitive theorists emphasize the value of learning how to negotiate, since it is an important feature of peer interaction and games (Corsaro, 1981; Fine, 1981). From a social-contextual perspective, peer relationships facilitate the development of skills which allow children to operate in different groups and in different contexts. Thus, communication skills learned in negotiation and conflict resolution are useful in contexts other than play. According to social learning theory, peer relationships provide opportunities for discovering rule and role relationships.

The positive contributions of peer relationships to a child's development are especially significant in light of the research which indicates that early problems with peer relationships are predictive of later emotional and behavioral disturbances. For example, children who experience problems with peer relationships are more likely to experience adult mental health problems (Cowen, Pederson, Babigian, Izzo, & Trost, 1973); drop out of school (Ullman, 1957); and be identified as juvenile delinquent (Roff, Sells, & Golden, 1972). While it cannot be concluded that a casual relationship exists between

inadequate peer relationships of elementary school students and problems as an adult, research does indicate that low status in peer relationships, as evidenced by peer rejection, is a significant predictor of adjustment problems later in life.

Since peer relationships are important and many children in elementary school have no classroom friends (Gronlund, 1959), the early identification of children experiencing problems in peer relationships and the development of strategies to facilitate positive peer relationships are essential contributions to an individual's social, cognitive, and social-cognitive development. Traditionally, the literature on children's peer relationships desribes sociometric assessments and behavioral observations as methods of identifying children with peer relationship problems. In studying young children's peer relationships, play behaviors also become important. Play behaviors, as they are related to peer group status, were the major focus of this study.

Sociometric assessments are most frequently used in the identification of peer group status. Positive-negative nomination (Moreno, 1934) and the play rating-scale (Asher, Singleton, Tinsley, & Hymel, 1979) are two sociometric measures which have been improved for use with preschoolers through the picture nomination technique developed by McCandless and Marshall (1957). In recent studies, distinct status groups have been created through the use of a social impact score (the number of children who mention a child, i.e., the number of posicive nominations plus the number of negative nominations) and social preference scores (the predominance of either positive or

negative nominations) (Coie, Dodge, & Coppotelli, 1982; Dodge, 1983; Goldman, Corsini, & deUrioste, 1980; Peery, 1979).

A significant study of young children's sociometric status used the positive-negative nomination measure and the play rating-scale to create four status groups (Goldman et al., 1980). The Coie et al. (1982) research presents a highly systematic way of using standardized social impact and social preference scores to create status groups in elementary children. This system of identifying status groups has not previously been used in research with young children. Therefore, the present research was designed to extend the work of Coie et al. by using their system to identify status groups in preschoolers. Furthermore, this study replicated the work of Goldman et al. by using three sociometric measures in assessing sociometric status in preschoolers: the positive nomination, negative nomination, and play rating-scale.

In addition to sociometric measures, researchers have used behavioral observations to study peer relationships. While there is ample research examining the behavioral correlates of popularity and unpopularity (e.g., Gottman, Gonso, & Rasmussen, 1975; Hartup, Glazer, & Charlesworth, 1967; Marshall & McCandless, 1957), there is a small body of research examining the differences in specific play behaviors of young children with varying peer group status. Since young children rarely interact unless they are playing, behavioral observations of children in play situations become very important. Two studies of children's social status and play behaviors make significant contibution to the field of play and sociometric status

(Goldman et al., 1980; Rubin, 1982). However, neither of these studies fully addresses the nature of all play behaviors of preschool children from specific status groups (i.e., popular, average, controversial, rejected, neglected). Therefore, the present research was designed to replicate and extend the Rubin and Goldman et al. studies.

In order to further an understanding of observed play behaviors in the preschool, it has been suggested that researchers be "well aware of the importance of activities and materials made availible to children" (Rubin, 1977, p. 384). One of the earliest studies investigating the differences in social play, as related to differences in materials, is Van Alstyne's (1932) evaluation of toys' social utility. Results of the Van Alstyne study indicated that blocks, wagons, doll corners, and colored cubes had the highest social value; while materials with the least social value were paint, crayons, and scissors. The results of similar studies suggest that type of materials provided affect the kind of play in which children engage; as well as the amount of time spent playing together (Quilitch & Risley, 1973; Rubin, 1977; Updegraff & Herbst, 1934; Vandenberg, 1981).

Since variation in observed play behaviors may be due to the materials made available during free play time, any assessment of children's play behaviors should also provide information concerning setting variables. In studies examining play behaviors and sociometric status, no research has included the study of materials and activities as important variables influencing the behaviors of children. Attention to environmental factors of the various

preschool settings was an important aspect of this study.

Method

Subjects

The 95 children in this study were selected from eight preschools in the Champaign-Urbana, Illinois area. Ten classrooms, with enrollments ranging from 6 to 13 were used. The age of the children ranged from 44 months to 60 months (M= 53.7, sd= 4.21). Forty-five of the children were male and 50 were female.

Behavioral Observations

All observations of children's play behaviors were recorded during indoor free play time. Using a sequential time-sampling method, 60 observations were made of each child's play behaviors over a 2-4 week period. The children's play behaviors were coded using Rubin's (1981) coding scheme which nests Smilansky's (1968) cognitive play categories within Parten's (1932) social participation categories. Parten's categories of social participation are: solitary play, parallel play, and group play. Smilansky's cognitive play categories are: functional play, constructive play, dramatic play, and games-with-rules. In Rubin's (1981) revision of the Smilansky system, the following categories were added: exploratory play, unoccupied behavior, onlooker behavior, reading, active conversation, transitional behavior, and rough-and-tumble play.

Sociometric Assessment

The sociometric measures administered were: the positive nomination, negative nomination, and play rating-scale. The picture nomination method was used for all three measures. Since

the sociometric measures were used for identification, only same-sex scores were elicited (Asher & Hymel, 1981).

Materials Assessment

The analysis of play materials was based on the method outlined by Kritchevsky and Prescott (1969). For 15 days, observers recorded all of the materials and activities designated by the classroom teacher as activities permitted during free play time. Those materials were then rated along two dimensions: complexity and variety. According to Kritchevsky and Prescott, complexity and variety are measures of interest. More specifically, complexity is the extent to which a material contains potential for active manipulation and alteration by children. Variety is the measure of different things there are to do.

Analysis Procedures

Following the Coie et al. (1982) procedure, positive nominations and negative nominations were tallied, standardized and transformed into social preference and social impact scores. These were then used to identify children for the five social status groups defined by Coie and his colleagues. Social preference scores and social impact scores were standardized within classrooms. The five status groups and their criteria were:

(1) Popular children received a social preference score of greater than 1.0, a positive nomination standardized score of greater than 0, and a negative nomination standardized score of less than 0.

(2) Average children received a social preference score of greater than -.5 and less than .5 and a social impact score of greater than -.5 and less than .5.

(3) Controversial children received a social impact score of greater than 1.0 and positive and negative nomination standardized scores that were each greater than 0.

(4) Rejected children received a social preference score of less than -1.0 , a negative nomination standardized score of greater than 0, and a positive nomination standardized score of less than 0.

(5) Neglected children received a social impact score of less than -1.0 and an absolute positive nomination score of 0 or 1.

Play rating scores were used to form three groups: low, average, and high. The average play rating score for the sample was 2.2 with a standard deviation of .42. Therefore, the low group had a mean play rating score which was one standard deviation below the sample mean, or a score between 1.1 and 1.8. The average group had a mean score between 1.9 and 2.5. The high group had a mean score between 2.6 and 3.0, one standard deviation above the sample mean.

A frequency score for each play behavior was recorded. These frequency scores were then analyzed in a series of analysis of

variance procedures in order to determine possible relationships between play behaviors and peer group status. The same play behavior frequency scores were used in a series of Pearson product moment correlational analyses. Play behaviors were correlated with positive nominations, negative nominations, and play rating scores.

In studying the relationship between environmental factors and observed play behaviors, materials and activities in each classroom were rated according to complexity and variety. A mean complexity and variety score was calculated for each classroom. Using a series of Pearson product moment correlational analyses, play behaviors were correlated with mean complexity scores and mean variety scores.

Results

Using the criteria for status group identification specified by Coie et al. (1982), 26 children (27%) did not meet the criteria for any one of the status groups. Of the remaining 69 children, no children were identified as controversial; 5 (7%) were neglected; 26 (38%) were rejected; 18 (26%) were average; and 20 (29%) were popular. A third sociometric measure, the play rating-scale provided an index of "overall likeability" for each child. Using a 3-point scale, children rated their same-sex peers according to, "How much do you like to play with?" Categories of Low, Average, and High were established using the criteria previously described. In the sample, 17 (18%) were rated Low by their peers; 52 (55%) were rated Average; and 26

(27%) were rated High.

The major question addressed in this study was: What is the relationship between play behaviors and sociometric status of preschool children? It was predicted that (1) children who engage infrequently in group-dramatic play will have low peer acceptance scores on sociometric measures and neglected peer group status; and (2) children who engage frequently in onlooker and unoccupied behaviors, and solitary-functional and solitary-dramatic play will have low peer acceptance scores on sociometric measures and neglected peer group status.

Frequency scores for each play behavior were correlated with standardized positive and negative nominations, and play rating-scores. Results indicated that a low but significant positive relationship existed between group-dramatic play and positive nominations, $r = .17$, $p < .05$. The positive nominations were significantly negatively correlated with unoccupied behavior, $r = -.21$, $p < .05$. Table 1 presents a summary of the correlational analyses between play behaviors and sociometric measures.

A one-way analysis of variance procedure was used to test the hypothesis that children who engage infrequently in group-dramatic play have neglected peer group status. Results of the analysis indicated that there was no significant relationship between group-dramatic play and neglected peer group status. However, an examination of the status group mean scores for group-dramatic play revealed that the play scores for the neglected group ($M = 1.80$, $sd = 1.92$) were much lower than the scores for

the rejected (M = 8.11, sd = 8.92), average (M = 7.72, sd = 6.93), or popular (M = 9.20, sd = 5.69) groups. A series of analysis of variance procedures tested the relationship between neglected peer group status and onlooker behavior and unoccupied behavior. The analyses indicated that there was no significant relationship between neglected peer group status and these nonsocial behaviors. Again, an examination of the mean scores for these play behaviors by status groups revealed that for unoccupied behavior and onlooker behavior, the neglected group had the highest mean scores. Refer to Table 2 for a summary of mean play behaviors by status.

A second question addressed in this study was: What is the relationship between complexity and variety of classroom materials and observed play? It was predicted that there would be a positive relationship between complexity and dramatic and group play. It was also predicted that there would be a negative relationship between complexity and functional play, onlooker behavior, and unoccupied behavior. A negative relationship between variety and onlooker and unoccupied behaviors was also predicted. These hypotheses were tested through a correlational analyses.

Complexity was significantly negatively related to unoccupied behavior (r = -.52, $p \leq .005$) and solitary-functional play (r = -.26 $p \leq .05$). Complexity was significantly positively related to all forms of constructive play and all forms of group play. Variety was significantly negatively correlated with unoccupied behavior, r = -.39, $p \leq .005$; and significantly positively related to group-

constructive play (r = .38, p < .01). These results are summarized in Table 3.

Discussion

While the major purpose of the study was to examine the relationship between play behaviors and sociometric status, the method of identifying status groups was an important part of the study and yielded results which require some discussion.

In this study, 9.5% of the children received no positive nominations and nearly 16% received only one positive nomination. Since peer relationships are important and 25% of the children in this study may have no or few classroom friends, the results suggest further inquiry into the consequences and correlates of low peer group status. The fact that so many children have so few positive nominations has implications for early childhood education and where the focus of programs should be.

When only the play rating scores were used to identify sociometric status, then out of 95 children, 14 were identified as unpopular because they received low ratings. However, when positive nominations and negative nominations were used in combination with social preference and social impact scores, more than twice as many children (31) were identified as unpopular -- either rejected or neglected. Clearly, the number and type of children identified in each status group is dependent upon the sociometric measure (or combination of measures) used in the identifaction process. The distribution of children using all three sociometric measures is presented in Table 4.

In order to more closely examine the differences in the play behaviors of two distinctly different status groups, a post hoc analysis was performed whereby all three sociometric measures were used to indentify an extreme rejected and extreme popular group. The extreme rejected group (n =12) had a standardized social preference score less than 1, a standardized negative nomination score greater than 0, a standardized positive nomination score less than 0, and a play rating score between 1.1 and 1.8. The extreme popular group (n = 11) had a standardized social preference score greater than 1, a standardized positive nomination score greater than 0, a standardized negative nomination score less than 0, and a play rating score between 2.6 and 3.0. These two groups were of special interest because they seemed to represent the extreme liked and extreme disliked in the sample.

Therefore t-tests were performed in order to determine if significant differences exist in the play behaviors of these two groups of children. Results indicated significant differences in group play and group-dramatic play for these two groups. The extreme rejected group had a significantly lower group play score (M = 11.58, sd = 8.18), than did the extreme popular group (M = 18.91, sd = 4.97), t (21) = -2.56, p = .02. For group-dramatic play, the extreme rejected group had a significantly lower score (M = 6.42, sd = 4.91) than the extreme popular group (M = 11.27, sd = 6.41), t = -2.05, p = .05. Clearly, the children who were disliked, as assessed through multiple sociometric measures, were engaging in significantly less social play than the popular children.

For purposes of social skills intervention, a play training paradigm could be used with these extreme rejected children in order to study the effects of group-dramatic play training on peer group status.

In two previous studies where social impact and social preference scores were used to define status groups, a controversial group was identified. In the Coie et al. (1982) study, the controversial group was defined as those children who received many positive and negative nominations, thus receiving high impact and low preference scores. In Goldman et al. (1980) study, a similar group was identified and labeled as "High Like/High Dislike." There was no controversial group identified in the present study. Since controversials receive many positive and many negative nominations (as is reflected in the social impact score), it may be that they are receiving nominations from more than one smaller group or clique within the classroom or grade level. However, in small classrooms the existence of cliques is unlikely. If it is true that controversials receive their nominations from various subgroups, then the size of the nominating group may be an important factor accounting for the possibility of having controversial peer group status.

Further modification of the sociometric methodology may be needed in future research on young children's peer relationships. By using the Coie et al. system of standardized positive and negative nomination scores and preference and impact scores, 27% of the sample were "unidentified" since their nomination scores did

not fulfill the criteria established for any one of the five status groups. Because there is an average group, as well as extreme groups (popular and rejected), it seems that the system of identification should accomodate all or nearly all of a sample studied.

Results indicated that there was no significant relationship between neglected peer group status and play behaviors. While examination of the peer group mean scores for the specific play behaviors suggests that significant differences between groups might exist, the within-in group variance was so great that between-group differences could not be identified. Thus, since the neglected group did have the lowest mean group-dramatic play score, and the highest mean scores for unoccupied and onlooker behaviors, further research is needed with a larger sample in order to uncover possible relationships between neglected peer group status and participation in certain play behaviors.

While play partners were not recorded in a systematic manner, it was noted that when a play partner was absent the group dynamics changed considerably, and so did the kind of play. For example, if two children frequently engaged in group-dramatic play in the block corner, and one of the duo was absent, the child in attendance played alone -- usually with puzzles or play dough. This change in play behaviors was noted by several observers on various occasions during the time in which behavioral observations were made. Therefore, the constant change in the structure of the play group due to a change in play partners may account for some of the large within-group variance. Further study of stability of play behaviors

and selected play partners over time is recommended.

The low but significant negative correlation found between onlooker and unoccupied behaviors and the play rating scores suggests that not playing at all may be negatively related to peer acceptance. It may be that children who engage in some form of play are more likely to be nominated as liked and/or selected as a play partner than those who stand around uninvolved in any activity. Future research needs to address the issue of how unoccupied and onlooker behaviors are related to peer acceptance in preschool children.

In this study, the rejected group engaged in more solitary play than did the other groups; a finding supported in other research (Dodge, Coie, & Brakke, in press; Goldman, et al., 1980). Similarly, the neglected group had the second highest mean score for solitary play. This result is also supported in past research (Dodge, 1983; Dodge et al., in press). Thus, the results of the present research suggest that playing alone may be negatively related to peer acceptance.

The final purpose of this study was to examine the relationship between play materials and observed play behaviors. It was predicted that classrooms rich in complex materials, those requiring improvisation and group involvement, would have more dramatic and group play and less functional play, onlooker, and unoccupied behaviors. Results indicated that complexity of materials in a classroom was positively related to group-constructive, group-drmatic, and group-games. Complexity was also negatively related

to less social forms of play, i.e., unoccupied behavior and solitary-functional play. Complex materials usually accomodate at least four children, thus classrooms with more complex materials seemed to "pull for" more group involvement. Variety was significantly negatively related to unoccupied behavior. This result suggests that when more choices were made available, there was more involvement in activity. Therefore, the results of this study support Vandenberg's (1981) assertion that the type of play observed in a preschool is strongly influenced by features of the environment. It appears that materials which allow manipulation and improvisation and a greater choice in the selection of materials are related to the occurrence of higher levels of social play (i.e., group) as well as higher levels of cognitive play (i.e., constructive).

Conclusion

In conclusion, while the major hypothesis of the study was not supported, the distribution of status groups presents a significant issue for future studies of young children's peer relationships. An important issue which has been raised as a result of the present research concerns the use of forced choice positive-negative nomination techniques in small preschool classrooms. One question raised as a result of the research is: What if any, is the relationship between nonsocial behaviors such as unoccupied or onlooker behavior and peer group status in preschoolers? With regards to group-dramatic play and social status, play training for rejected children is an intervention strategy demanding further attention in the research on social skills interventions of young children. Finally, the study supports the necessity of attending to environmental factors when studying the play behaviors of young children.

References

Asher, S., & Hymel, S. (1981). Children's social competence in peer relations: Sociometric and behavioral assessment. In J.D. Wine & M.W. Smye (Eds.), Social competence (pp. 126-157). New York: Guilford Press.

Asher, S., Singleton, L., Tinsley, B., & Hymel, S. (1979). A reliable sociometric measure for preschool children. Developmental Psychology, 15 (4), 443-444.

Coie, J., Dodge, K., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. Developmental Psychology, 18 (3), 577-580.

Corsaro, W. (1981). Friendship in the nursery school: Social organization in peer environment. In S. R. Asher & J. M. Gottman (Eds.), The development of children's friendships (pp. 207-241).

Cowen, E., Pederson, A., Babigian, H., Izzo, L., & Trost, M. (1973). Long term follow-up of early detected vulnerable children. Journal of Consulting and Clinical Psychology, 42, 438-446.

Dodge, K. (1983). Behavioral antecedents of peer social status. Child Development, 54, 1386-1399.

Dodge, K., Coie, J., & Brakke, N. (in Press). Behavior patterns of socially rejected and neglected preadolescents: The roles of social approach and aggression. Journal of Abnormal Child Psychology.

Fine, G. (1981). Friends, impression management, and preadolescent behavior. In S. R. Asher & J. M. Gottman (Eds.), The development of children's friendships (pp. 29-52). New York: Cambridge University Press.

Goldman, J., Corsini, D., & deUrioste, R. (1980). Implications for positive and negative sociometric status for assessing the social competence of young children. Journal of Applied Developmental Psychology, 1, 209-220.

Gottman, J., Gonso, J., & Rasmussen, B. (1975). Social interaction, social competence, and friendship in children. Child Development, 46, 709-718.

Gronlund, N. (1959). Sociometry in the classroom. New York: Harper

Hartup, W., Glazer, J., & Charlesworth, R. (1967). Peer reinforcement and sociometric status. Child Development, 38, 1017-1024.

Kritchevsky, S., & Prescott, D. (1969). Planning environments for young children: Physical space. Washington, D.C.: National Association for the Education of Young Children.

Marshall, H., & McCandless, B. (1957). A study in prediction of social behavior of preschool children. Child Development, 28, 149-159.

McCandless, B., & Marshall, H. (1957). A picture sociometric technique for preschool children and its relation to teacher judgments of friendship. Child Development, 28, 139-148.

Moreno, J. (1934). Who shall survive? A new approach to the problems of human relations. Washington, D.C.: Nervous and Mental Disease Publishing.

Parten, M. (1932). Social participation among preschool children. Journal of Abnormal Psychology, 28, 136-147.

Peery, C. (1979). Popular, amiable, isolated, rejected: A reconceptualization of sociometric status in preschool children. Child Development, 50, 1231-1234.

Piaget, J. (1932). The moral judgment of the child. Glencoe, New York: Free Press.

Quilitch, H., & Risley, T. (1973). The effects of play materials on social play. Journal of Applied Behavioral Analysis, 6, 575-578.

Roff, M., Sells, S., & Golden, M. (1972). Social adjustment and personality development in children. Minneapolis: University of Minnesota Press.

Rubin, K. (1977). The social and cognitive value of preschool toys an activities. Canadian Journal of Behavioral Science, 9, 382-385.

Rubin, K. (1982). Nonsocial play in preschoolers: A necessary evil? Child Development, 53, 651-657.

Rubin, K. (1981). Manual for coding free play behaviors of young children. University of Waterloo, Waterloo, Ontario, Canada.

Smilansky, S. (1968). The effects of sociodramatic play on disadvantaged children. New York: Wiley.

Updegraff, R., & Herbst, E. (1933). An experimental study of the social behavior stimulated in young children by certain play materials. Journal of Genetic Psychology, 42, 372-391.

Ullmann, C. (1957). Teachers, peers, and tests as predictors of adjustment. Journal of Educational Psychology, 48, 257-267.

Van Alstyne, D. (1932). Play behavior and choice of play materials of preschool children. Chicago: University of Chicago Press.

Vandenberg, B. (1981). Environmental and cognitive factors in social play. Journal of Experimental Child Psychology, 31, 169-175.

Table 1

Correlations Between Play Behaviors

and Sociometric Measures

Play Behavior	Positive Nomination	Negative Nomination	Play-Rating
Unoccupied	-.21*	-.08	-.18*
Onlooker	-.08	.04	-.22*
Reading	-.09	-.13	-.002
Conversation	.05	-.01	.10
Transitional	-.13	-.02	-.11
Rough-and-Tumble	-.06	-.14	-.04
Solitary-Functional	-.08	-.06	-.12
Solitary-Constructive	-.13	.22*	.13
Solitary-Exploratory	-.03	.04	-.10
Solitary-Dramatic	-.09	.04	-.02
Solitary-Games	.03	-.08	.07
Parallel-Functional	-.07	.03	-.04
Parallel-Constructive	.13	-.04	.01
Parallel-Exploratory	.18*	.13	.01
Parallel-Dramatic	-.09	-.03	.07
Parallel-Games	.08	-.02	.03
Group-Functional	-.06	-.07	.19*
Group-Constructive	.17*	-.008	.01
Group-Exploratory	-.21*	-.15	.12
Group-Dramatic	.17*	.08	.12
Group-Games	.06	.08	.05

*$p \leq .05$

Table 2

Mean Play Behaviors by Status

Play Behaviors	Neglected (n = 5)	Rejected (n = 26)	Average (n = 18)	Popular (n = 20)
Unoccupied	4.20(1.45)	2.35(2.20)	2.06(1.80)	1.85(2.16)
Onlooker	8.60(4.93)	6.23(5.30)	6.55(4.06)	5.55(4.43)
Reading	1.16(2.30)	1.08(2.43)	1.28(2.43)	.84(1.53)
Conversation	5.80(3.11)	4.31(2.40)	5.55(2.97)	4.15(2.70)
Transition	5.40(3.78)	4.38(2.98)	4.17(3.05)	3.65(1.78)
Rough-and-Tumble	0	.38(.57)	.28(.46)	.35(.59)
Solitary-Functional	1.00(1.00)	1.19(1.67)	.89(1.28)	.90(1.25)
Solitary-Constructive	1.80(2.17)	4.00(3.50)	3.44(2.91)	2.45(2.30)
Solitary-Exploratory	.60(1.34)	.35(.74)	.28(.67)	.20(.52)
Solitary-Dramatic	1.20(.84)	1.15(1.29)	1.06(1.48)	.85(1.18)
Solitary-Games	.20(.45)	.11(.43)	.22(.73)	.25(.72)
Parallel-Functional	2.20(2.68)	2.69(2.57)	2.33(2.20)	2.55(2.46)
Parallel-Constructive	12.20(4.15)	14.92(7.02)	12.44(5.54)	16.60(7.61)
Parallel-Exploratory	0	.15(.46)	.28(.46)	.20(.52)
Parallel-Dramatic	7.40(1.06)	3.77(4.41)	4.22(7.49)	3.30(4.59)
Parallel-Games	0	.23(.59)	.33(.97)	.50(1.32)
Group-Functional	.20(.45)	.35(.74)	.89(1.28)	.25(.64)
Group-Constructive	.30(3.54)	3.19(3.99)	4.44(3.62)	5.15(4.50)
Group-Exploratory	1.80(2.17)	.19(.49)	.17(.51)	.10(.31)
Group-Dramatic	1.80(1.92)	8.11(8.92)	7.72(6.93)	9.20(5.69)
Group-Games	.80(1.79)	.88(1.45()	1.33(1.63)	1.10(1.52)

Note. Number in parentheses is the standard deviation.

Table 3

Correlational Analysis Between Materials

Assessment and Play Behaviors

Play Behavior	Complexity	Variety
Unoccupied	-.52***	-.39***
Onlooker	-.20	-.22
Reading	-.34**	-.28*
Conversation	-.14	-.01
Transitional	-.21	-.12
Rough-and-Tumble	-.16	-.23
Solitary-Functional	-.26*	-.09
Solitary-Constructive	.31**	.17
Solitary-Exploratory	-.18	.02
Solitary-Dramatic	-.07	.05
Solitary-Games	-.03	.13
Parallel-Functional	-.05	.08
Parallel-Constructive	.24*	.09
Parallel-Exploratory	.18	.23
Parallel-Dramatic	.05	.32*
Parallel-Games	-.30*	-.15
Group-Functional	-.15	-.22
Group-Constructive	.40***	.38***
Group-Exploratory	.36**	-.22
Group-Dramatic	.23	.06
Group-Games	.25*	.33**

*$p \leq .05$
**$p \leq .01$
***$p \leq .005$

Table 4

Distribution of Children Using Positive Nominations,

Negative Nominations, and Play Rating Scale

Mean Rating	Popular (n = 20)	Average (n = 18)	Rejected (n = 26)	Neglected (n = 5)
(Low) 1.1 - 1.8	0	2	12	0
(Average) 1.9 - 2.5	9	10	13	4
(High) 2.6 - 3.0	11	6	1	1